

Input: ffmpeg x264 compressed 2 min 32 s red camera test video sequence "crossing" [1920 pixels x 1080 lines x 24 fps] with 2s IDR period (48 frames) at 30 Mbit/s bitrate in the default placebo mode

Output: Compressed 2 min 32 s red camera test video sequence "crossing" [1920 pixels x 1080 lines x 24 fps] with 2s IDR period (48 frames)

FFMPEG v20200603

FFMPEG Default = ffmpeg x264 encoder in the default placebo (the slowest and the highest quality) mode

EMPEG-H.264/AVC0001.0000

EMPEG Default = EMPEG H.264 encoder in the default mode

VMAF v1.5.1 using v0.6.1. model

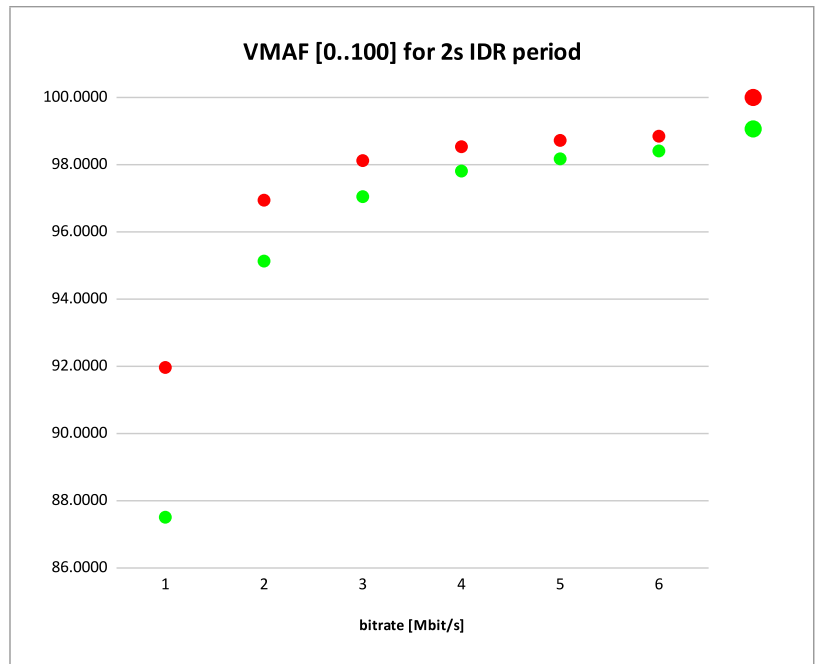
PSNR From VMAF library

SSIM From VMAF library

2s VMAF		
Mbit/s	FFMPEG Default	EMPEG Default
1	87.5064	91.9639
2	95.1301	96.9425
3	97.0481	98.1208
4	97.8093	98.5342
5	98.1736	98.7222
6	98.4083	98.8469

EMPEG Default has 66% bitrate of FFMPEG Default for the same VMAF.

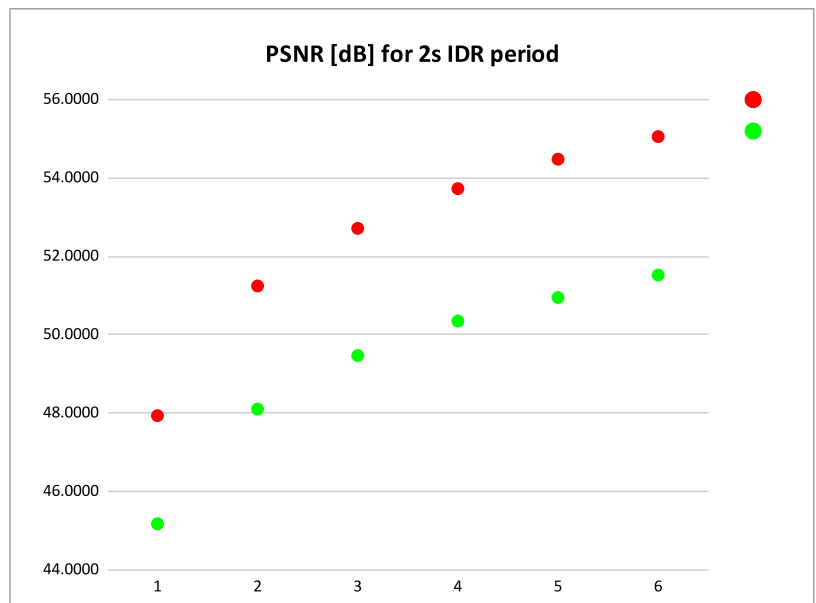
2s VMAF (difference from EMPEG default)		
Mbit/s	FFMPEG Default	EMPEG Default
1	-4.4575	0.0000
2	-1.8125	0.0000
3	-1.0727	0.0000
4	-0.7249	0.0000
5	-0.5486	0.0000
6	-0.4387	0.0000



2s PSNR [dB]		
Mbit/s	FFMPEG Default	EMPEG Default
1	45.1770	47.9366
2	48.1042	51.2443
3	49.4702	52.7129
4	50.3502	53.7271
5	50.9497	54.4789
6	51.5237	55.0559

EMPEG Default has 50% bitrate of FFMPEG Default for the same PSNR.

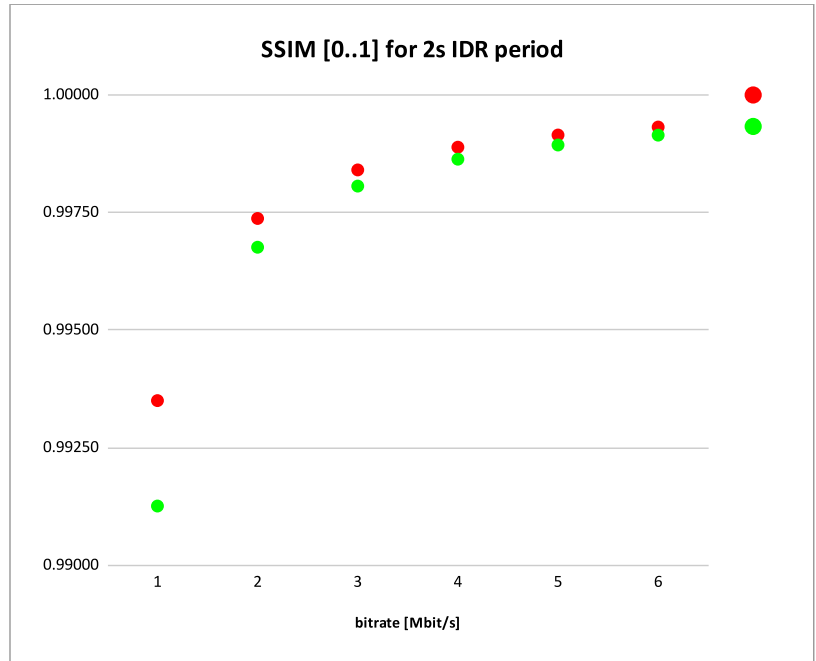
2s PSNR [dB] (difference from EMPEG default)		
Mbit/s	FFMPEG Default	EMPEG Default
1	-2.7597	0.0000
2	-3.1401	0.0000
3	-3.2427	0.0000
4	-3.3769	0.0000



5	-3.5293	0.0000
6	-3.5322	0.0000



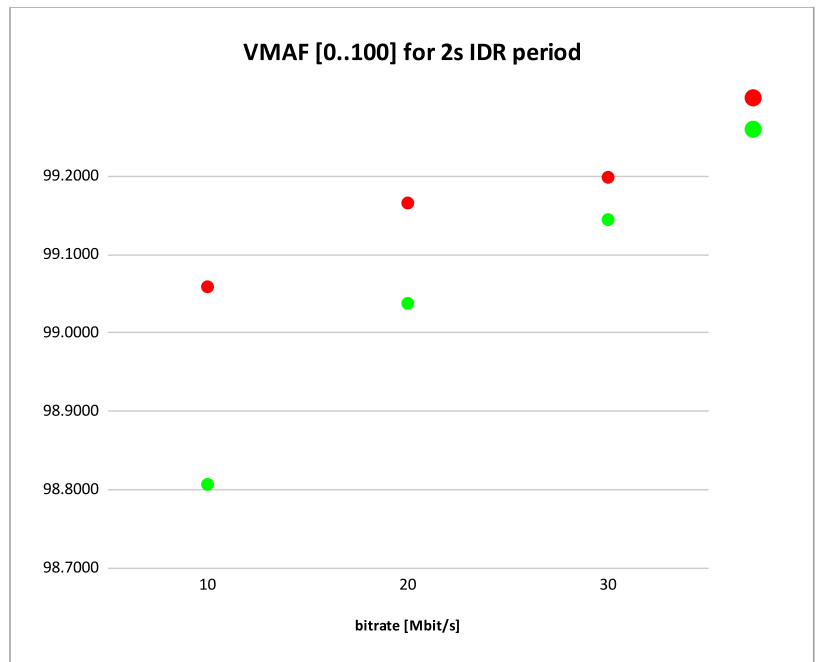
2s SSIM		
Mbit/s	FFMPEG Default	EMPEG Default
1	0.99126	0.99350
2	0.99676	0.99737
3	0.99806	0.99841
4	0.99863	0.99889
5	0.99894	0.99915
6	0.99915	0.99932



EMPEG Default has 77% bitrate of FFMPEG Default for the same SSIM.

2s SSIM (difference from EMPEG default)		
Mbit/s	FFMPEG Default	EMPEG Default
1	-0.00224	0.00000
2	-0.00061	0.00000
3	-0.00034	0.00000
4	-0.00026	0.00000
5	-0.00021	0.00000
6	-0.00017	0.00000

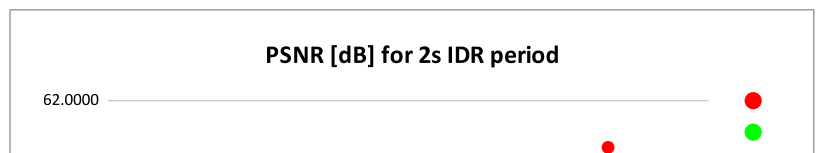
2s VMAF		
Mbit/s	FFMPEG Default	EMPEG Default
10	98.8069	99.0589
20	99.0379	99.1659
30	99.1446	99.1986



EMPEG Default has 55% bitrate of FFMPEG Default for the same VMAF.

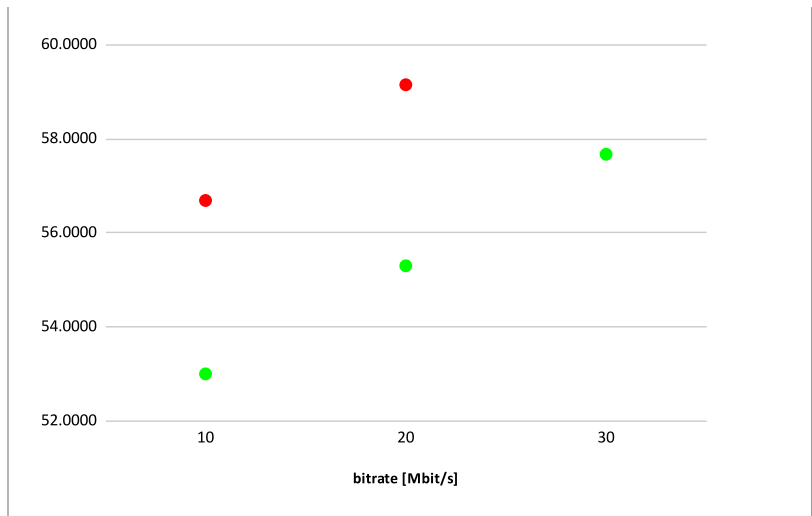
2s VMAF (difference from EMPEG default)		
Mbit/s	FFMPEG Default	EMPEG Default
10	-0.2521	0.0000
20	-0.1280	0.0000
30	-0.0540	0.0000

2s PSNR [dB]		
Mbit/s	FFMPEG Default	EMPEG Default
10	53.0019	56.6886
20	55.3003	59.1487
30	57.6711	61.0068

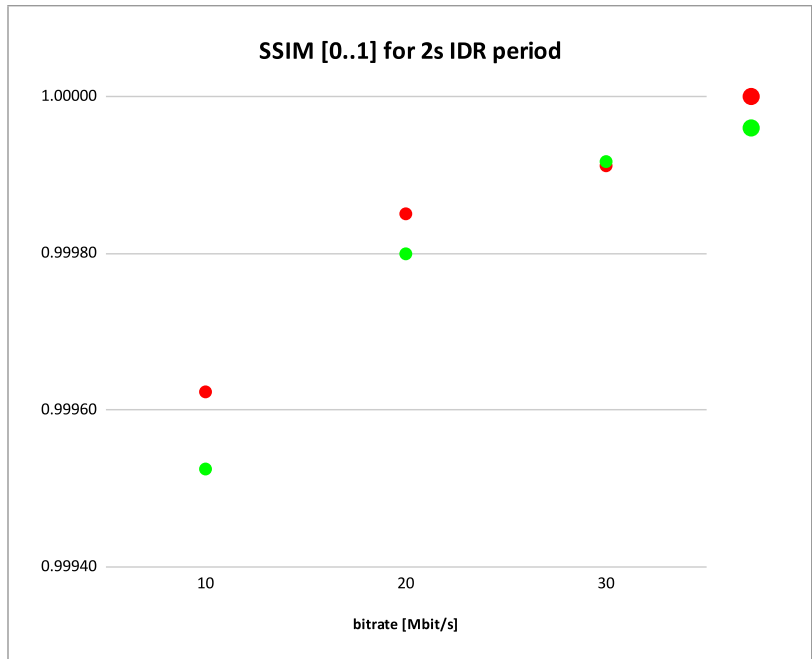


EMPEG Default has 44% bitrate of FFmpeg Default for the same PSNR.

2s PSNR [dB] (difference from EMPEG default)		
Mbit/s	FFMPEG Default	EMPEG Default
10	-3.6867	0.0000
20	-3.8484	0.0000
30	-3.3357	0.0000



2s SSIM		
Mbit/s	FFMPEG Default	EMPEG Default
10	0.99952	0.99962
20	0.99980	0.99985
30	0.99992	0.99991



EMPEG Default has 81% bitrate of FFmpeg Default for the same SSIM.

2s SSIM (difference from EMPEG default)		
Mbit/s	FFMPEG Default	EMPEG Default
10	-0.00010	0.00000
20	-0.00005	0.00000
30	0.00001	0.00000